

Facing the Challenge of Social Forestry in Japan: The Case of Reviving Harmonious Coexistence Between Forest and People in Okayama Prefecture

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Abstract Social forestry as a development strategy has evolved since the 1970s, especially in the tropics, to address forest degradation and promote local community development amidst the burgeoning population in these areas. As a practice, however, social forestry has been in place since ancient times in many parts of the world, including Japanese forest communities. Forest-people relationships in Japan drastically changed through massive afforestation programs after the energy source change and with the industrialization of the forest sector in 1950s. The majority of the planted forests are underutilized today and forest communities are marginalized due to the decline of forestry operations, depopulation, and changes in people's values. Some communities address this concern by inviting potential urban migrants who may be interested in settling in rural areas. Using the case of the Nishiawakura Village in Okayama Prefecture, this paper explores the recent challenges confronting social forestry in Japan. It is found that underutilization of forest resources can be a cause of serious environmental degradation and marginalization of forest communities, and that Nishiawakura's journey to renew forest management in partnership with migrants is a process of revisiting and creating the forest-people

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relationship. This study advances two related arguments, namely (1) the interaction of the local people and the migrants brings new perspectives to forest management, and (2) in a community facing depopulation and underutilization of forest resources, social forestry can be an effective approach to rediscover traditional forest management in a new form and revitalize forests and local communities.

Keywords Forest–people relationship · Forest management · Depopulated forest community · Underutilization of forest resources · Migrants

Introduction

Social forestry has evolved as an alternative forest management strategy, since the 1970s, to address the dual problems of forest degradation and forestry-related needs of forest-dependent communities (FAO 1978; Kirchoffer and Mercer 1986; Arnold 1991). Because of the perceived advantages over the industrial forestry model, social forestry programs spread rapidly throughout Asia and the Pacific, dominantly in tropical countries (Pulhin 1996; Arnold 2001). Social forestry as a practice, on the other hand, has existed long before development programs were conceptualized and implemented, including in non-tropical areas such as Japan (Knight 1996; Tanaka 2003; CIFOR 2004; Maruyama and Miyaura 2007). However, the issues being faced by forest communities in Japan are in sharp contrast to those being encountered by communities in tropical forests.

In many tropical countries, population pressure on limited forest resources is one of the central issues that upland communities face (Cropper and Griffiths 1994; Carr 2009). In contrast, limited population and underutilization of resources are the major issues of forest communities in Japan (Nishino 2008). Hilly and mountainous areas cover about 50 % of Japan's total land area, while the population of these areas accounts for only 4 % of the total national population (Ohno 2005).

Another contrast is the approaches for managing the upland population. In-migration of rural poor to uplands is discouraged in many tropical countries, being considered as pressure on limited forest resources. In contrast, in-migration of outsiders to forest communities is encouraged in Japan to increase the population including human resources for forest management (Forestry and Forest Products Research Institute 2006; Forestry Agency 2008; Nishino 2008). Local governments of depopulated forest communities deliberately invite people from urban areas through internet campaigns and job fairs. Urban people who intentionally settle and work in rural areas are called 'I-turn migrants'. An 'I-turn migrant' is a pun on the term 'U-turn migrant',¹ and the letter 'I' represents the one-way movement of migration, from urban areas to rural areas.

In Japan, expansive afforestation intended to meet high timber demand after the Second World War was heavily promoted in late 1960s (Sinrin-Ringyou-Mokuzaisangyou Jiten Henshuu Iinkai 1993). Changing *satoyama*—a socio-ecological production

¹ U-turn migrants are those who are born and raised in rural areas, and return to their hometown after migrating to urban areas (Yamamoto et al. 1998).

landscape formed through harmonized human–nature relationship and natural broadleaf forests—into monoculture coniferous forests was seen as a promising investment, because domestic timber demand and prices were high at the time. *Satoyama* was disregarded after people began focusing on the monetary value of timber due to the energy source change from firewood and charcoal to fossil fuel. Over 8 M ha of land were reforested or afforested between 1948 and 1970 (Nishino 2008).

The total area of forest land in Japan as of 2007 is 25.1 M ha, covering 67 % of Japan's total land area, and the percentage of planted forest land is 41.2 %. The amount of forest stock increased from 1.83 billion m³ in 1966 to 4.43 billion m³ in 2007. The ratio of planted forest stock to total forest stock is 59.8 % (Forestry Agency 2007a, b). Most of planted trees, however, remain unutilized due to the low demand for domestic timber despite the high timber demand in Japan (Shirai 2009; Yamada 2009). One of the major reasons is the dominance of imported timber in the Japanese market. Timber import was liberalized in 1960 by the central government in an attempt to meet the high demand for timber and to stabilize timber prices, before the planted trees became ready for harvest. Imported timber increased its share in Japanese timber markets, and Japan's self-sufficiency in timber decreased from 94.5 % in 1955 to 20.3 % in 2006. The expansive afforestation program was terminated in 1996. However, Japan's policy of no tariff on timber is still in place, and it has been pressuring the domestic forestry. Other reasons are stagnant approaches in processing and marketing domestic timber (Tanaka 2002), and insufficient quality control and customer care by lumber companies (Ogi 2009).

In Japan some portions of *satoyama* were under private ownership, and some were under de facto *Iriai* forest ownership (Yamashita et al. 2009) where the villagers manage the resources collectively. Notably, most of the *satoyama*, even under the private ownership, were more or less regulated by communities. *Iriaichi* were not open access land, but were accessed by those who had *iriaiken*, the right to use resources of *iriaichi*. Access was regulated by particular rules for sustainable use of resources, and *iriaiken* was taken away from violators (Kubota 2003). Members of *iriaichi* were users of resources and at the same time stewards of forests. The value of *satoyama* in Japanese society, however, has declined, and collective management of *satoyama* as *iriaichi* is not as common today as previously (Maruyama and Miyaura 2007).

Conversion of *satoyama* to planted monoculture forests basically disconnected the harmonious coexistence between humans and forests. Decline of the forest industry discouraged forest owners from maintaining their forests, and young people from working in forestry, despite huge available forest resources.

Forest communities are marginalized due to depopulation, decline of the forestry sector, degradation of forests, and regional gaps between urban areas and rural areas in earning levels, employment opportunities, social welfare and education (Honma 2007; Ohno 2008). Communities where 50 % of the population is aged over 65 and which have difficulties in maintaining social welfare systems and communal functions have been labeled *genkai-shuraku* (barely viable communities) by the sociologist Ohno (2005). About 8,000 communities are considered to be *genkai-shuraku*, and over 400 communities are at risk of disappearance within 10 years (Ministry of Land, Infrastructure, Transport and Tourism 2007; Ohno 2008).

Another contemporary threat to forest communities is acquisition of forestland by foreign investors due to decreasing prices of forestland in Japan. Unlike agricultural land the trade of which is regulated by the *Agricultural Land Act* (1952), purchase and sale of forestland is open to any buyers as long as the transaction is reported to the governor within 2 weeks and a real property tax is paid. Approaches of foreign investors have been reported in some areas including Okayama, Mie, Nagano, Saitama, Hokkaido and Aomori (Hirano and Yasuda 2010). Japan is likely to face the risk of losing its forest resources including water essential for domestic, agricultural and industrial use when forests are acquired by these investors.

Nishiawakura Village is one of the depopulated forest communities with abandoned monoculture coniferous forests and a stagnant forestry sector. In order to manage the forestland sustainably and to build a self-sustained community, the village considered the forests as its primary local resource and started to create a new forestry industry. The village office felt the need of external knowledge and experience to implement effectively the initiative, and it has been promoting partnerships between local people and I-turn migrants.

Using the case study approach, this paper analyzes the relationship of people (local people and I-turn migrants) and forests in Nishiawakura Village, Okayama Prefecture, Japan, under a social forestry perspective. The specific objective of the study is to analyze the views of the local people and the I-turn migrants about the: (a) current state of the forests and the community; (b) the ideal state of the forests and the community; and (c) renewed *morizukuri* (forest management) as a means to attain the ideal state. This study is based on the contention that it is important to understand how the partnership between local people of a depopulated forest community and outsiders for renewing forest management shapes forest-people relationships. Such an understanding can lead to deeper insights into social forestry concepts and in promoting pro-active community-based action.

The Study Area and the Forestry Initiatives Adopted

Nishiawakura Village is located in the northeastern tip of the Okayama Prefecture in southwestern Japan (Fig. 1). It is situated on the southern slope of the Chugoku mountain range, and lies at 134.2°E and 35.1°N.

The village has a canyon topography where the Yoshino River cuts through it, and communities have settled along the river (Fig. 2). There are five rivers flowing through the village, and the headspring of the Yoshino River is located in the Wakasugi natural forest situated in the northeastern part of the village (Nishiawakura Village 2008). The average temperature in Nishiawakura is 13.6 °C with January being the coldest month at 2.7 °C on average and August being the warmest at 25.7 °C. The average annual rainfall is 1,487.5 mm (Nishiawakura Village 2008).

Nishiawakura Village (administrative unit) has a total land area of 57.93 km², 95 % of which is classified as forest land. Only 116 ha or 2 % of the land area is allocated for agriculture (Nishiawakura Village 2008). The main crop is rice, occupying 108 ha, and vegetables including spinach, asparagus, eggplant, Chinese cabbage and Japanese radish are also grown. Agriculture alone cannot support

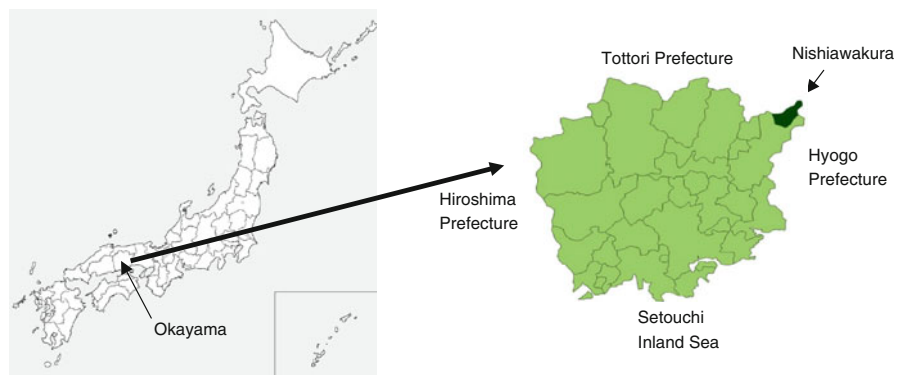


Fig. 1 Location of the study area

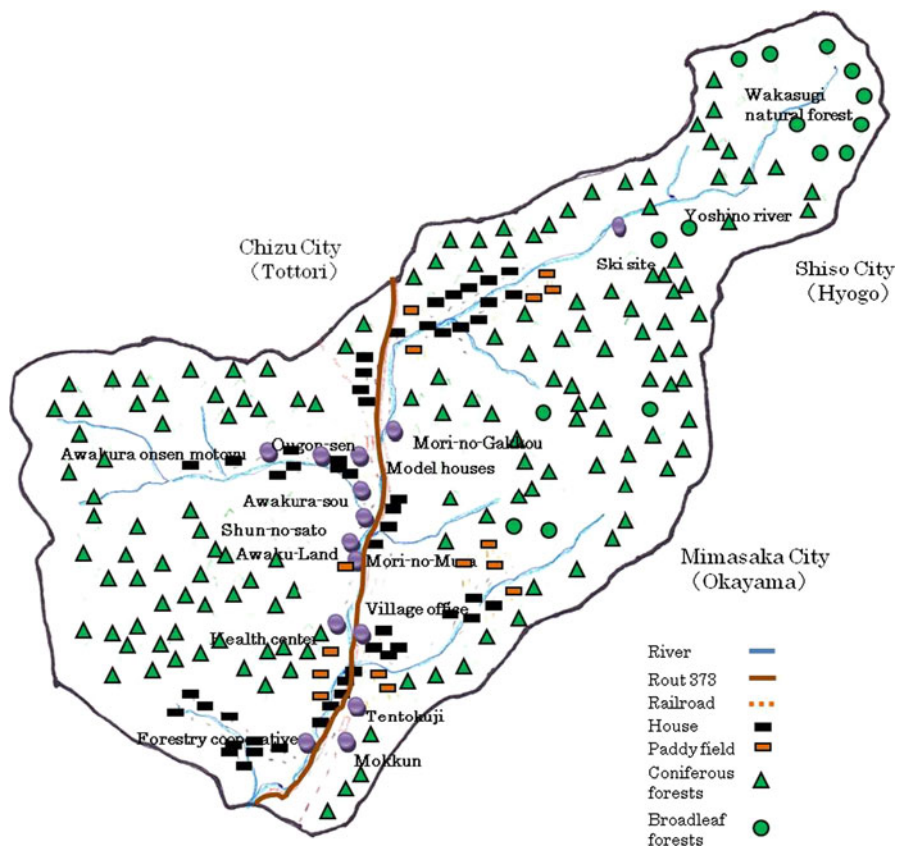


Fig. 2 Community map of Nishiwakura

individual households, and 98 % of farmers have other businesses (Nishiawakura Village 2008).

Nishiawakura Village is a forest community that has been struggling with the severe decrease and aging of the population. As of July 2011, Nishiawakura Village had a total population of 1,583 individuals. In the past decade, a sharp population decline of more than 200 people was experienced, with a relatively uniform annual decline from 1,864 in 1998 to 1,634 in 2007. The depopulation rate of the village was 8.0 % in 2005 which was the highest in Okayama Prefecture. The major factors of depopulation in Nishiawakura are aging, low birthrate and out-migration (Fig. 3) caused by lack of job opportunities, limited access to higher education and the loss of the sense of dignity as villagers. The phenomenon of underpopulation has caused various negative impacts on community life, including the closure of some schools within the village and in neighbouring areas due to a decrease in the number of children, and the difficulties in implementing social activities such as community festivals.

The employed population of the village decreased from 960 in 1990 to 799 in 2005. That of the service sector is relatively high because tourism has been the main industry of the village. The population employed in forestry approximately halved between 1990 and 2005. There are three timber mills and about 30 carpenters skilled in traditional carpentry. They survived on the construction demand for replacement of facilities and houses due to public projects including road and railway

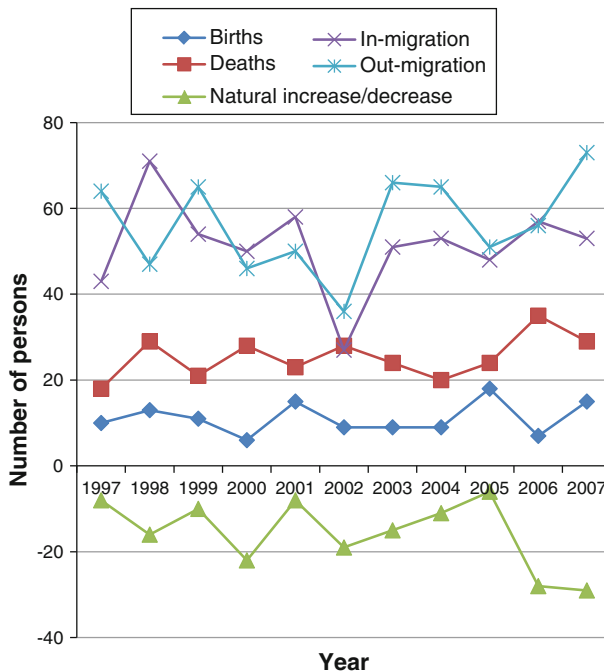


Fig. 3 Population movement in Nishiawakura from 1997 to 2007. *Source* Nishiawakura Village (2008)

construction. The displacement programs have already finished and they need alternative approaches to market their services.

The village used to own 2,714 ha (49 %) of the forest land. However, it sold about 250 ha to villagers between 1949 and 1971 to meet its financial needs for the construction of a junior high school and tourist facilities. Another 650 ha were sold in 1966 because people stopped gathering fodder and fuel there after fossil energy and mechanization of agriculture were introduced. The village kept selling its forest land, and only 1,270 ha (23 %) remains as village-owned (Table 1). Many small-scale forest owners suddenly emerged, and there are now more than 1,300 owners including individual private owners, private companies, and Nishiawakura Village. About 74 % of the forest land is privately owned (Nishiawakura Village 2008).

The village used to have *satoyama* where people manage and depend on mixed forests for firewood, charcoal and fodder for cattle. Most of broadleaf trees, however, were felled and replaced with coniferous trees between 1949 and 1974 on the belief that the latter will generate greater economic returns (Nishiawakura Village 1977). The majority of forest owners joined in the expansive afforestation promoted by the Japanese government since 1954. Currently, 85.6 % of the forest lands is planted, mostly with Japanese cedar (*Cryptomeria japonica*) and Japanese cypress (*Chamaecyparis obtusa*).

Most of the owners stopped managing their forests about 20 years ago, when they found that costs for maintenance and harvest exceeded expected income from selling timber. The forestry sector of the village has been declining due to the dominance of imported timber, lack of a workforce, and little attention from younger generations who inherited the forests. Ironically, villagers choose to build their houses with imported timber, while the planted trees stay on the mountains without being touched. The trees in the unmanaged forests are thin, and some stand dead.

While many depopulated communities chose to be merged into larger towns or cities during the large-scale merging of communities promoted by the central government between 1999 and 2010, Nishiawakura decided to stand alone in order to pursue its own community development.

In April 2009, Nishiawakura launched the Hyakunen-no-Mori (Forests of 100 years old) program as a strategy to revitalize forests and the community through

Table 1 Forestry data of Nishiawakura village

Type of holding	Total forest area	Forest with timber			Bamboo grove	Unstocked land	The ratio of plantation forest (%)
		Planted (ha)	Natural (ha)	Total (ha)			
Public							
Village	1,270	933	337	1,270			73.5
Prefecture	62	61	1	62			98.4
Public corporations	115	114	1	115			99.3
Private	4,044	3,580	423	4,003			89.4
Total	5,491	4,615	762	5,391	6	35	85.6

renewing *morizukuri* of the village. The program consists of two projects: the Creation of 100-year old forest project and the Mori-no-Gakkou (school of forest) project. The program is based on the concepts of *joshitsu-na-inaka* (rurality with high quality life) and *shinsangyou* (industry which reflects people's hopes and appeals to people's hearts), which were originally developed by the former village mayor.

The Creation of 100-year old forest project aims to enhance the conditions of forests through continuous management. The village manages forests entrusted by the forest owners for 10 years. Most of owners have small parcels of forest land, and the forest land is grouped into 16 blocks with owners' agreements in order to conduct thinning and road construction efficiently and effectively. All the entrusted forests will be Forest Stewardship Council certified. The contract is renewable for another 10 years.

As Fig. 4 shows, the project has been initiated by the village office, the Nishiawakura forestry cooperative and Tobimushi, an external consulting company hired by the village office for funding and business development consultancy. The village office is in charge of obtaining agreements and contracts from forest owners for entrustment. It provides financial inputs through its special account for the project. The forestry cooperative is responsible for a forest survey, development of a forest management plan, and execution of group thinning. The initiatives of the forestry cooperative are financially supported by national treasury disbursement upon request to the Japanese government. Tobimushi established a forest trust fund named *Kyoyu-no-Mori* (jointly owned forests) for purchasing forestry machines and for constructing strip roads with the cooperation of Music Securities Inc. which financially supports unique social activities. The fund aims to not only raise funds but also increase the number of individuals who are interested in Nishiawakura and its *morizukuri*.

The Mori-no-Gakkou project aims to resuscitate the forestry sector and connect people with forest resources through networking. It focuses on public relations of Nishiawakura and forest-related services and products. Mori-no-Gakkou is a private corporation, established by the village office and Tobimushi. Its main products are wooden houses built using traditional Japanese construction methods using locally produced timber species and with housing-related materials such as floorboards utilizing forest thinnings.

The Hyakunen-no-Mori program is considered to be the core initiative of *morizukuri* of Nishiawakura by the village office and the other institutions that take part in the program. The planning team of the program decided that the involvement of young people from outside of the village is necessary in order to expand creativity and to promote the program by connecting the village to urban areas. The village has been keenly inviting I-turn migrants, and about 40 migrants are now settled and involved in *morizukuri*.

Research Method

This study employed qualitative research because of its purpose of analyzing social phenomena (the forest–people relationship) of a specific cultural group (local people

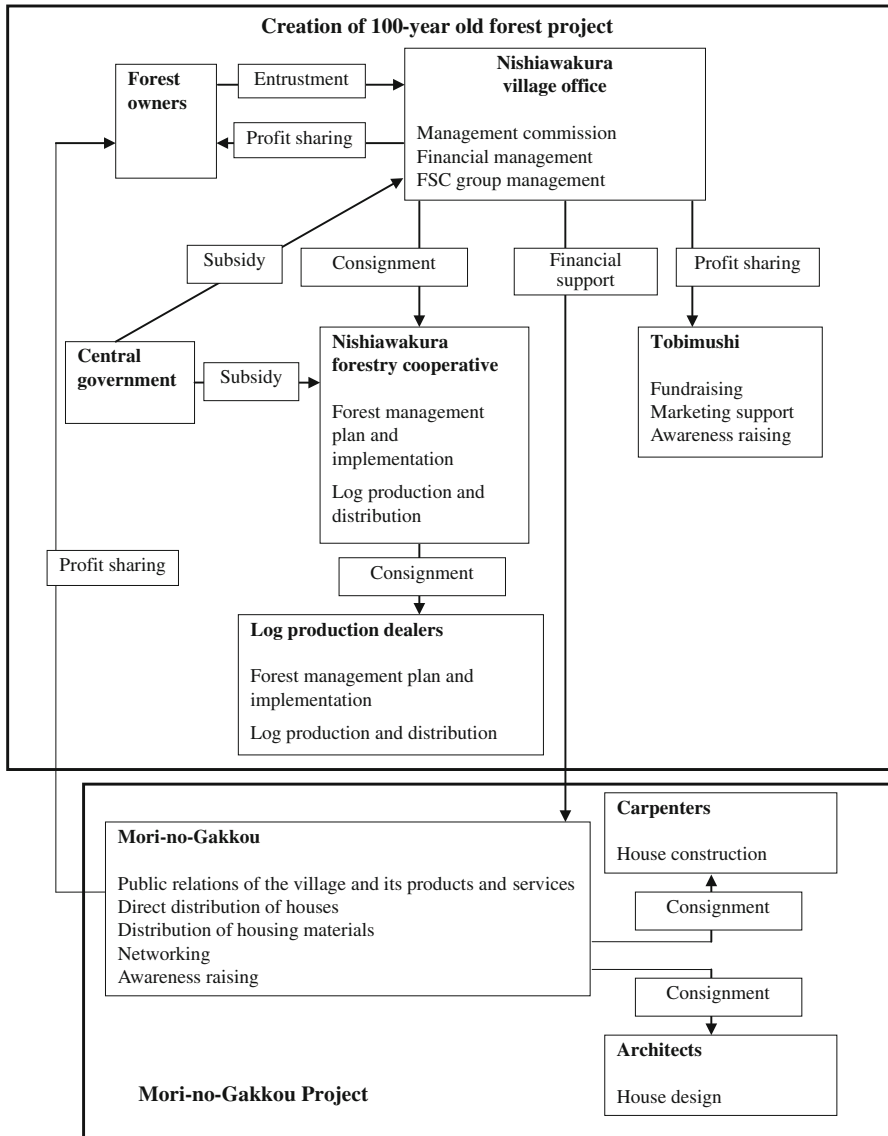


Fig. 4 Structure of the Hyakunen-no-Mori program

and I-turn migrants of Nishiawakura) through bringing out views of research participants without manipulation. It aimed to present a plausible interpretation of a case of the study site and to provide insights to strengthen social forestry in forest communities that face similar issues. Using a case study approach which is a holistic investigation for analyzing complex social phenomena in a specific context (as described by Lofland and Lofland 1995), the views of the local people and I-turn migrants on *morizukuri* at Nishiawakura were interpreted.

A field survey was conducted from July to December 2009. Unstructured interviews were carried out to generate data in order to bring out respondents' perspectives without predetermining their responses. A total of 14 respondents were interviewed. One local resident and one I-turn migrant were chosen from each of the following institutions: the Nishiawakura forestry cooperative, the Mokkun woodworking company, the Mori-no-Mura tourism corporation, Mori-no-Gakkou, and the village office. In addition, the village mayor who was the initial proponent of the Hyakunen-no-Mori program, and two forest owners who were interested in *morizukuri*, one with large forestland (30 ha) and another with relatively small forestland (3 ha), were included. Both older generations who experienced the massive afforestation and younger generations who did not, were included as respondents. Most people engaged in *morizukuri* were males, but one female was selected from both local people and I-turn migrants for gender consideration (Table 2).

Interviews were conducted in the offices or houses of the research participants. Individual interviews lasted for about one and a half hours, and two interview sessions with each participant were conducted. Through the interviews, respondents' views on current situations and their ideal image of forest-people relationships in Nishiawakura, and on Nishiawakura's *morizukuri* were shared and documented.

In addition to interviews, on-site observation was employed through joining in locally-organized tours for an introduction of *morizukuri* initiatives, visiting forests with owners or forestry workers, and casually conversing with villagers in their daily lives. On-site observation provided opportunities to interact with diverse stakeholders of *morizukuri* including forest owners, carpenters, timber mill owner, and architects, and to bring out feelings and stories of these stakeholders in very informal settings.

Table 2 Summary of the research participants' characteristics

Participant	Age	Sex	Category	Work
A	70s	Male	Local person	Forest owner
B	50s	Male	Local person	Village mayor
C	50s	Male	Local person	Village office
D	50s	Male	Local person	Village office
E	50s	Male	Local person	Forest owner
F	40s	Male	Local person	Nishiawakura forestry cooperative
G	40s	Male	Local person	Mori-no-Mura tourism corporation
H	40s	Male	I-turn migrant	Mori-no-Mura tourism corporation
I	30s	Male	Local person	Mokkun woodworking company
J	30s	Male	I-turn migrant	Nishiawakura forestry cooperative
K	20s	Female	I-turn migrant	Village office
L	20s	Male	I-turn migrant	Mokkun woodworking company
M	20s	Female	Local person	Mori-no-Gakkou
N	20s	Male	I-turn migrant	Mori-no-Gakkou

Secondary data including The History of Nishiawakura (Nishiawakura Village 1977), Nishiawakura's Plan for Self-sufficiency as a Depopulated Area (Nishiawakura Village 2008), and Facts of Nishiawakura (Nishiawakura Village 2008), were reviewed to obtain basic data and to learn the historical context of the community.

Results

Views on the Current State of the Forests and the Community

Both I-turn migrants and local people recognize that the conversion of forest lands through coniferous forests plantation is the main cause of forest degradation today. Local people mentioned that they were highly interested in forests for their economic value in the midst of the industrialization of forestry in the 1950s and 1960s. Nine respondents stressed that focusing on economic value resulted in excessively developed monoculture coniferous forests. The finding suggests that people and forests are connected by the monetary value today, unlike the traditional relationship, in which forests and people were connected by spiritual, recreational, and educational values, as well as economic values.

Industrialization of forestry has influence on forestry institutions' and workers' approaches. Local respondents are concerned with how current forestry work is managed. Forestry activities rely on subsidies and public projects, and local people stressed that these activities tend to pursue efficiency and short-term profit without long-term vision or honest intentions to benefit forest owners. This finding indicates that forests have become a commodity and forestry a mere tool to earn cash income. The respondents expect that the Hyakunen-no-Mori program will change such a trend.

Five out of nine local respondents eagerly talked about their experiences of playing in forests during their childhood. They recalled forests as playgrounds. They lament that children do not play there anymore because of the risks of being lost or injured in the degraded and dark forests and due to the introduction of indoor entertainment such as television and computer games. This indicates that forests have lost their value as playgrounds.

One of the local respondents shared a local term *zuri*, shallow craters found in forests that were formed through frequent visits of people. In the past, people walked inside the forests so often to collect fodder and firewood that *zuri* were developed. Abandoned coal pits are found everywhere in forests as well. The pits are found near the top of mountains with steep slopes; this indicates that people used to go deep inside the forests for their livelihood and fuel. These observations suggest that people's lives became disconnected from forests, after fossil fuel was introduced.

In the past few decades, the connection between forests and people continued to weaken. The local respondents are concerned about young people's attitudes, including attitudes of children. Older generations cannot transfer their knowledge about their own forests because the younger generations are not interested. The majority of young people do not know the exact location of their own forests.

Both older and younger generations are not confident or proud of forest-related business because of its tough and unstable image. The bleak future of forestry and

uncertainty towards village life discourage local people from remaining in the village and being involved in forest management.

While local people are losing their interest in forests and forestry, I-turn migrants appreciate the existing knowledge and practices, which can be reflected in *morizukuri*. Even though forests and people have little interaction today, knowledge and skills that may strengthen the link between the two already exist within the village, and I-turn migrants value these. The interviewed I-turn migrants mentioned that they decided to move to Nishiawakura because of job opportunities related to forestry or community development there. They believe that one of the benefits they can bring into the village for revitalization of forests and the community is their points of view as outsiders. They are hopeful that they can play active roles to rediscover indigenous wisdom taken for granted by local people.

All the respondents stressed that only a limited number of local people currently participate in *morizukuri* with a sense of ownership. They stated that *morizukuri* is initiated by I-turn migrants and a small number of local people. I-turn migrants are highly concerned about the absence of effective teamwork for *morizukuri*. They feel that *morizukuri*-related institutions are not well organized and lack effective leadership and clear vision. This finding indicates that the meaning of *morizukuri* needs to be discussed by *morizukuri*-related institutions for effective implementation.

Views on the Ideal State of the Forests and the Community

Kyousei or harmonious coexistence between people and healthy forests that nurture biodiversity is a shared vision of the I-turn migrants and the local respondents. They aspire for closer relationship between forests and people. Creation of healthy forests means more people intervention. *Kyousei* requires wise utilization of forest resources.

The respondents' immediate vision is to build a harmonious relationship between planted coniferous forests and people. The relatively long-term vision is to bring broadleaf forests back. Replacing planted coniferous forests with broadleaf forests will be challenging because the existing trees are planted for economic purposes. However, the respondents including those who joined in massive afforestation envision revitalization of broadleaf forests and traditional forest management. The finding suggests that people are becoming aware of the consequences of the excessive industrialization of forestry and are now seeking alternative and sustainable ways of forest management.

Revival of forests and forestry means revitalization of the community, and renewed *morizukuri* is expected to be a key to increase the village population. All the respondents believe that well-managed forests and stable forestry business will encourage people including families with children to return to or migrate into the village.

Views on Renewed *Morizukuri* as a Means to Attain the Ideal State

Three local respondents stressed the importance of proactive forest utilization instead of simply following the agenda of subsidies. They also argued that transparency in developing plans is crucial to gain forest owners' trust. The Hyakunen-no-Mori project is recognized as one example of a proactive move wherein a forestry

cooperative develops its own proposals without waiting for funding agencies' instructions. However, they also pointed out that the project still relies on subsidies from the central government, and more self-sustainable approaches must be developed.

Three I-turn migrants and four local people suggested the utilization of thinnings. Currently, thinning is done for forest maintenance, and logs are wasted in forests, because logging costs are higher than expected income. They suggested that diversified timber utilization is necessary to balance logging costs and income.

Revival of old practices such as production of firewood for pottery and installation of a wood stove in every house, and development of new activities such as production of wooden chips for paper manufacturing and as heat source are proposed by both local people and I-turn migrants. Use of whole trees is suggested not only for economic reasons but for the traditional Japanese value of appreciating all things without wasting anything.

I-turn migrants are eager to develop marketable goods and services which can make people closer to forests. They wish to remove barriers between forest owners and end-users by simplifying production and distribution flow. They also aim to revive people's recognition and appreciation of traditional carpentry through *morizukuri*. As one of the examples, I-turn migrants stressed the importance and potentiality of locally built houses. The village office and Mori-no-Gakkou have constructed two model houses (Fig. 5) with local carpenters, in cooperation with external architects who are interested in traditional construction methods. All the construction materials came from Nishiawakura forests. These houses are products of combined modern and traditional designs and materials. It is a unique way of ensuing economic value of forests while maintaining and promoting traditional carpentry which tends to vanish due to industrialization and modernization. To promote these model houses effectively, advocacy for house owners and architects is necessary, considering their limited knowledge on wood building materials. Other products which have been developed mainly by I-turn migrants and are selling well are ready-to-assemble wood flooring, wooden playground equipment, and wooden furniture designed and made by artisans. These products are mainly purchased by customers in urban areas.

Both I-turn migrants and local respondents feel the need to market products in urban areas which have large populations, dynamic economic activities, and potential buyers



Fig. 5 Model houses constructed through the Mori-no-Gakkou project

of products and services of rural areas. Suggested strategies are to: expand the market through the use of internet; establish shops in cities; and attract potential customers through provision of affordable and basic commodities and services. Mori-no-Gakkou and Tobimushi have already launched these strategies. In March 2010 Tobimushi established a space in Akihabara, a popular town among youths in Tokyo, primarily to promote Nishiawakura's initiative. The *morizukuri*-related institutions consider awareness-raising of urban people to be crucial for promoting the village and its products, even though it is challenging to build sustainable relationships between the village and urban people, instead of generating one-time customers.

Reconsidering lifestyles and the meaning of wealth is suggested by both I-turn migrants and local respondents. They pointed out that *morizukuri* will not effectively connect forests and people without making changes in lifestyles, and stressed that Nishiawakura people should develop their unique and sustainable ways of living in a small forest community. Establishing small-scale cyclical economy which fits to the local environment by consuming locally-produced timber within the village was proposed as an approach. The *morizukuri*-related institutions plan to promote the use of local timber by encouraging the installation of wooden playground equipment and the construction of public facilities and individual houses. The target is not to earn big profit, but to live sustainably.

I-turn migrants find that opportunities to be grateful to nature should be cherished. Community festivals held every October to celebrate harvests are recognized as a great example which should be passed on to future generations, even though performing them in the original forms is difficult today, due to depopulation and aging. Local people consider these festivals to be important as well because they strengthen people's ties, encourage villagers who left the village to visit their home town, and generate feelings of belongingness. In addition, three respondents suggested that customs and practices such as worshipping the God of mountains should be revived for spirituality in *morizukuri*.

Active listening is proposed for building mutual understanding and trust between I-turn migrants and local people. The local respondents are aware of barriers between the two parties. Most local people know little about I-turn migrants, and they are not aware of I-turn migrants' serious intention for *morizukuri*. The distance between the two was observed by the researchers through observations and casual interactions as well. The respondents argued that local people should be more open to and interested in I-turn migrants and recognize their efforts. It was also pointed out that I-turn migrants should communicate more with local people, because only a few I-turn migrants were keen on actively interacting with them. Proposed approaches are to set up opportunities for forest owners to observe I-turn migrants' efforts for *morizukuri*, and to keep inviting I-turn migrants to small events through which people interact casually and frankly.

Discussion

The case of Nishiawakura shows that underutilization of forest resources can be as serious as overexploitation. Environmental degradation can be caused by

depopulation and underutilization of resources, especially when dealing with a human-made environment (planted coniferous forests). Nishiawakura's *morizukuri* is considered to be a way to revitalize abandoned forest and a depopulated community and to increase population by related institutions and individuals inside and outside the village. Those who are involved are trying to change the current forest-people relationship, 'few people, abundant forests' to 'the good balance between human life and forests'.

Morizukuri of Nishiawakura is based on the appreciation of traditional forest management. Perspectives of I-turn migrants and local people imply that people hope to bring close a relationship between forests and people back by rediscovering existing knowledge and skills, through establishing small-scale forest-based community enterprises, and lifestyles change. However, this does not mean going back to the past. Renewing *morizukuri* means bringing the spirit and wisdom of traditional forest management and industrial forestry together. Integrating the two types of forestry in a good balance may revive traditional forest management as a social forestry practice in a form that will allow it to survive in modernized society.

Inviting outsiders to renew *morizukuri* appears to be an effective way to revive forests and forest communities. In Nishiawakura's case, even though I-turn migrants and their initiatives have not been fully recognized by local people due to ineffective information sharing and the villagers' tendency to keep their distance from newcomers, presence of the newcomers stimulates discussions about *morizukuri* and the future of the community. The migrants provide insights for new approaches of *morizukuri* by using their lenses gained from their experiences, and by sharing their discoveries about forests and existing knowledge and skills. The village office and the forestry cooperative consider I-turn migrants to be the core human resources for the promotion of *morizukuri*.

Morizukuri will be more sustainable with enhanced partnership between I-turn migrants and local people by interaction in depth. Building an effective partnership by crafting shared visions of the forest and community is important as well. Both local people's and I-turn migrants' sense of ownership toward *morizukuri* must develop further. Team building among individuals and organizations needs to be facilitated.

Many upland communities around the world are marginalized in the wave of modernization and industrialization (Contreras 2002; Robbins 2004). Some communities have taken up the challenge of sustainable resource management, while others have given up their relationship to local resources and decided to be integrated in the mainstream societies. Nishiawakura, a small village which could have been merged with bigger towns and cities, decided to manage the forest and develop the community on its own initiative. Its case shows that small depopulated forest communities can choose to be independent from the mainstream societies' trend without fighting against it. A community can benefit from its local resources and pursue its own aspiration in partnership with those who have genuine interest in collaboration, including outsiders. When collaborating with outsiders, a 'commitment principle'—which is defined as a principle for decision-making in which the authority of stakeholders is recognised to an extent that corresponds to their degree of commitment to relevant activities (Inoue 2011)—is indispensable for avoiding subordination to outsiders.

Conclusion and Policy Implications

Social forestry is a broad term encompassing a wide range of forest management activities that focus on the interactions of diverse stakeholders among themselves and with their environment, concerned with participatory and equitable development. This study suggests that the concept of social forestry can be applied to cases in which limited population and underutilization of resources are present. Population increase and scarcity of resources as twin issues tend to draw more attention internationally, but rural depopulation and underutilization of forest resources could be just as much a problem as the former and hence should merit equal attention. The latter may have a slower pace in affecting people's lives, but they could lead communities to eventually disappear and to the forests not fully serving the needs of the people.

Despite all the challenges, the partnership between I-turn migrants and local people for renewing *morizukuri* is an effective social forestry strategy for the following reasons: the purpose is to recreate and create balanced forest-people relationships; it is concerned with diverse aspects including economic development, equity, sustainability, spirituality and ecology; it utilizes locally available resources for revitalization of the community; and it is a joint effort of two kinds of populations, namely insiders (local people) and outsiders (I-turn migrants).

Nishiawakura's approach reflects the social forestry concept, which aims for enhanced forest-people relationship. The concept can be duplicated in other forestry communities in Japan. In any case, Japanese forest communities are already familiar with the concepts of social forestry through their experiences. *Satoyama* management, or traditional forest management, is a social forestry practice. It is a crucial time for forest communities to revisit their lives and consider how they can live in harmony with forests, rather than just observing forests being degraded.

Out-migration of youths and abandonment of resources are issues that are not exclusive to Japanese forestry communities. Similar issues can be found in other parts of the world including tropical countries, although reasons behind these problems may differ. The concept of *morizukuri* may be applied in these similar cases to encourage local people to give serious consideration to their locally available resources, and to pursue their own ways of resource and community development.

Considering the factors which make initiatives for renewing forest management unstable, including insufficient business opportunities for promoting sustainable forest management, underutilization of forest resources within local communities, and insufficient understanding of the situations of forest communities and people living there, there is some room for local and central government interventions for more effective and sustainable implementation of renewed forest management.

There are various business sectors which are likely to be interested in Nishiawakura's environment. Co-creating businesses with these enterprises which nurture forests through appropriate utilization will contribute to enhance the conditions of forests, to bring forests and people closer and to benefit the village and business enterprises financially. In order to incubate locally-suited businesses, the Ministry of Economy, Trade and Industry implemented *Chiiki Sigen Katsuyou Sinjigyou Tenkai Sien Jigyohi Hojokin*, a financial support program that subsidizes institutions including small-and-medium-sized enterprises to develop new products

or services utilizing local resources, in 2007. As of March 2011, 907 projects have been approved and received financial support through this program. The program, however, is a one-shot support for a limited number of institutions. In addition to this subsidy program, provision of tax incentives by the Ministry of Economy, Trade and Industry and the Forestry Agency to institutions which are established for effective utilization of forest resources by social entrepreneurs, whether they are from the community or from outside, should be considered. The tax incentives will motivate more people to build businesses which aim to contribute to revitalization of forests and communities and to make these businesses sustainable.

Usage of locally produced wood materials from local timber will strengthen the relationship between forests and people. It will provide forest owners an opportunity to see how the trees they nurture are processed and enjoyed by people, and it will encourage them to manage forests continuously. It will be a good advertisement of wood products to tourists who visit these communities as well. However, in Japan, locally made wood products usually are expensive compared with mass-produced wood products using low-cost labour abroad, whether they are wooden houses, furniture or toys. It is difficult for local people and institutions to choose more expensive local items. Provision of financial support such as subsidy and tax reduction for domestic use of forest resources will create an opportunity to local people and institutions to use locally available wood resources. For example, support can be given to construction of public facilities using local timber, installation of wooden playground equipment in day care centres and schools, and construction of wooden houses using local timber and local carpenters.

Depopulation, underutilization of forest resources, and abandonment of forests are nationwide problems in Japan. For a country with forest coverage of 67 %, of which 41 % is planted forest land, revitalization of forests and forest communities are urgently needed. This study suggests the social forestry approach is a way of promoting sustainable forest management and community development. It is recommended that local governments conduct studies on the current status of forest communities, their forest resources and local people's views on their relationships with forests, to explore the possibility of renewing forest management and reinvigorating forest communities, supported by the Ministry of Land, Infrastructure, Transport and Tourism and the Forestry Agency.

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